

## **SESSION 3.5**

# **ITS CABINET MONITOR SYSTEM**

**CLYDE NEEL**



# Model 212 CMU Versions

	<u>A</u>	<u>B</u>	<u>C</u>	<u>-208</u>	<u>-210</u>
CONFLICTING PHASES	-	F	F	-	F
FLASHER UNIT	-	F	F	-	-
SERIAL BUS #1	F	F	F	-	-
INDICATION ERROR (MULTI/LACK/CLRNC)	-	F	-	-	F*

VERSION: A – RAMP METERING(PDA 6)                      -208 – Ver A, w/o SB#1  
                     B – TRAFFIC SIGNALS(PDA 5)                      -210 – Ver C, w/o SB#1  
                     C – TRAFFIC SIGNALS, "CAL"

## ALL VERSIONS MONITOR:

Power Supplies	Monitor Error	FTR Coils
Logic Signal Error	Flash/Door Switches	AC Line
Circuit Breakers		



## **PURPOSE**

- . MONITOR ITS CABINET CONDITIONS**
- . CAUSE TRANSFER TO SAFE CONTROL MODE**
- . REPORT DIAGNOSTIC INFORMATION**

## **MONITORING FUNCTIONS**

- SIGNAL**
  - CONFLICTING CHANNELS**
  - MULTIPLE CHANNEL INDICATIONS**
  - LACK OF CHANNEL INDICATIONS**
  - SHORT/LONG YELLOW**
- CABINET POWER SUPPLIES**
- SERIAL BUS ERROR**

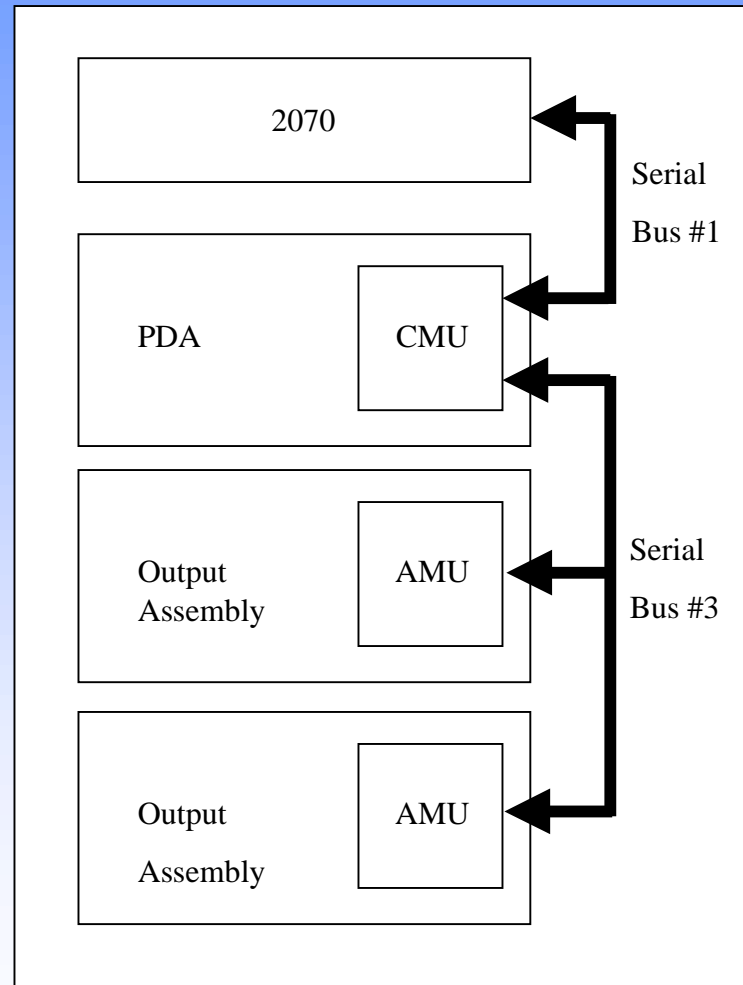
## **MONITOR FUNCTIONS (CONTINUED)**

- **MONITOR ERROR**
- **FLASH TRANSFER RELAY FAILURE**
- **LOGIC SIGNAL ERROR**
- **FLASHER UNIT OUTPUTS**
- **CIRCUIT BREAKER / MERCURY CONTACTOR**
- **POLICE / PDS FLASH**
- **AC LINE**

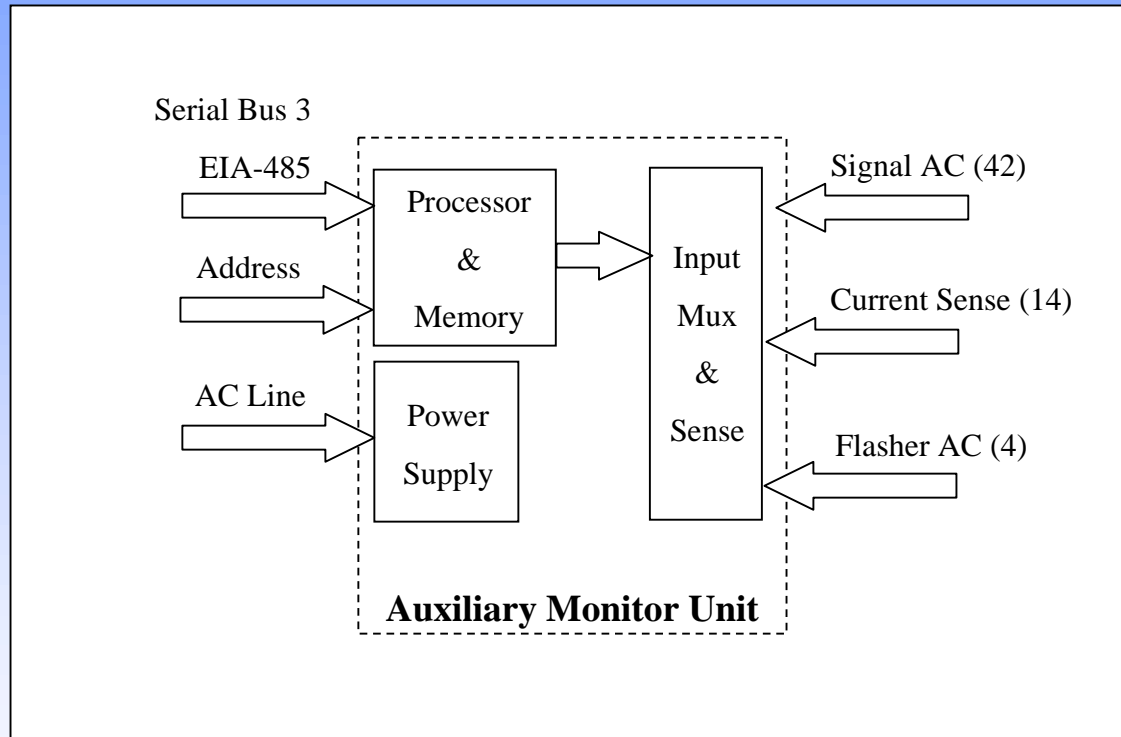
## **COMPONENTS**

- **AUXILIARY MONITOR UNIT (MODEL 214 AMU)**
- **CABINET MONITOR UNIT (MODEL 212 CMU)**
- **SERIAL BUS #1 AND #3**
- **CONTROL / SERIAL BUS HARNESSES**
- **DC POWER / COMM ASSEMBLY**
- **CURRENT SENSE COILS**

# MONITOR SYSTEM BLOCK DIAGRAM



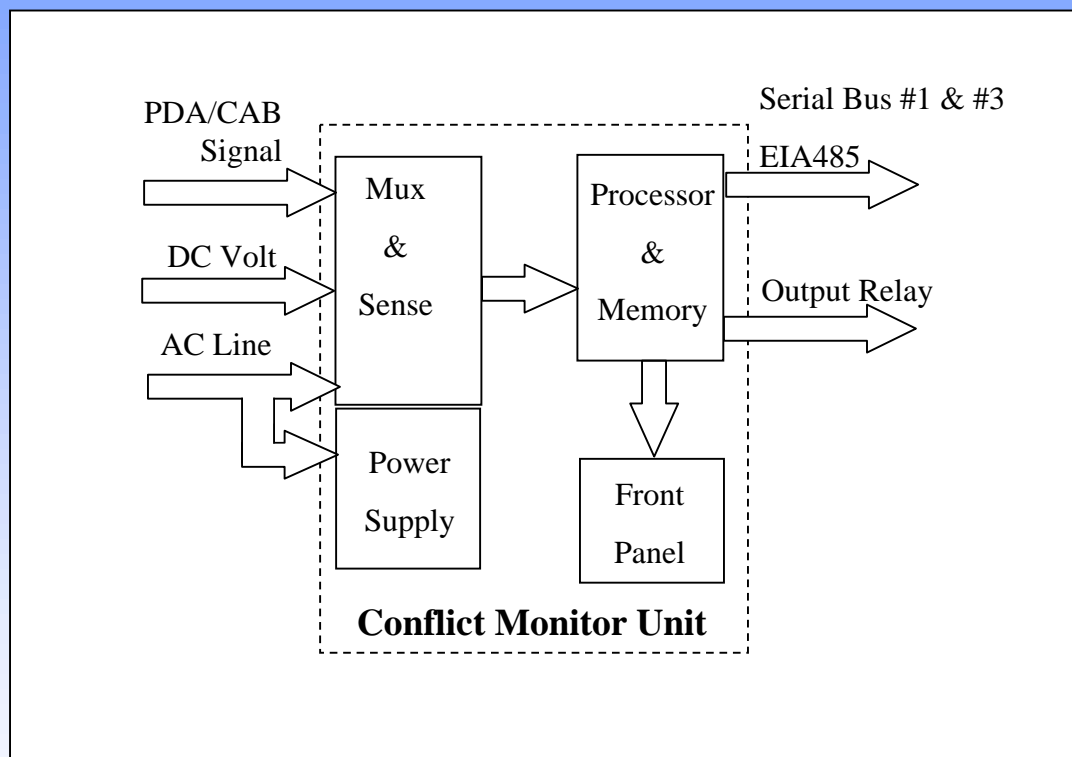
# AMU BLOCK DIAGRAM



## AMU FRONT PANEL FEATURES

- INDICATORS
  - DC POWER
  - COMM ACTIVE
  - ERROR
- RESET PUSHBUTTON
- HAND PULL

# CMU BLOCK DIAGRAM



## **CMU FRONT PANEL FEATURES**

- **POWER INDICATOR**
- **FAULT / STATUS INDICATORS**
- **DATAKEY**
- **RESET PUSHBUTTON**
- **EIA232 SERIAL PORT**
- **HAND PULL**

## **CMU FAULT / STATUS INDICATORS**

- **24VDC**
- **12VDC**
- **CONFLICT**
- **LACK OF INDICATION**
- **MULTIPLE INDICATIONS**
- **CONTROLLER/LOCAL FLASH**
- **CLEARANCE**
- **FIELD CHECK**
- **SB#1 & SB#2 ERROR**
- **DIAGNOSTIC**

## **DATAKEY PROGRAMMING**

- **CHANNEL ENABLES/ASSIGNMENTS**
- **CONFLICTING CHANNELS**
- **ENABLE MONITORING**
  - **LACK OF INDICATION**
  - **MULTIPLE INDICATION**
  - **SHORT/LONG YELLOW**